January 2023 Vol. 21 No. 1

NTT Technical Review 1 2023

https://www.ntt-review.jp/archive/2023/202301.html

Front-line Researchers

Rising Researchers

Feature Articles
Transport Network Technology for IOWN Implementation

Regular Articles

Global Standardization Activities

Front-line Researchers

Shigeto Furukawa, Senior Distinguished Researcher, NTT Communication Science Laboratories

▼Abstract

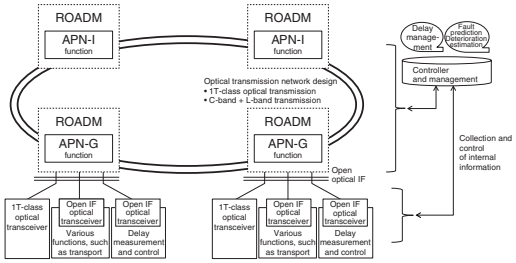
According to the World Report on Hearing issued by the World Health Organization, it is estimated that by 2050, approximately 2.5-billion people (one in four people) in the world will suffer hearing loss, which is considered a major risk factor in developing dementia. Hearing is an indispensable information-processing mechanism for understanding the environment and communicating with people and an important component of the sensory world that is directly linked to emotions. We interviewed Shigeto Furukawa, a senior distinguished researcher at NTT Communication Science Laboratories investigating the auditory mechanism, about the progress of his research activities and his attitude as a researcher.

Feature Articles
Transport Network Technology for IOWN Implementation

Optical Transmission Technology for Practical Implementation of the All-Photonics Network

▼Abstract

NTT Network Innovation Center is developing technologies and systems for the practical implementation of an optical transmission network, the key element for implementing the All-Photonics Network (APN), which in turn will support IOWN (the Innovative Optical and Wireless Network). With our next-generation optical transmission network, which is an advance release of the APN, we are working to increase speed and capacity to handle growing communication traffic as well as provide open optical interfaces for connecting various systems and devices without photoelectric conversion to enhance the added value provided by optical networks and develop operations and maintenance technologies for these networks.



Regular Articles

Understanding Desire to Touch Using Large-scale Twitter Data

▼Abstract

I and research colleagues investigated people's desire to touch by collecting and analyzing a large amount of text data that contain phrases such as "want to touch" on Twitter. We revealed the relationship between the body part that people want to touch and the touch gesture. We also revealed the effects of the COVID-19 pandemic on the desire to touch. Specifically, we observed "skin hunger," i.e., the strong desire for physical communication, and variation of touch avoidance toward objects such as doorknobs. Our results will be beneficial for understanding human behavior as well as for the further development of haptic technology.